Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of claims:

1. – 3. (cancelled)

4. (currently amended) The system of claim 3<u>1</u>, ~~further~~ wherein <u>the query formatter is configured to</u> ~~said problem reformulation as a natural language query is done by a portion or portions of the program that translates~~ <u>translate</u> functional relationships <u>in the machine representation of the problem statement</u> into semantic relationships.

5. (currently amended) The system of claim 3<u>1</u>, ~~further~~ wherein <u>the query formatter is configured to</u> ~~said portion or portions of the program for generating automatic reformulation of the problem generates reformulation of~~ <u>reformulate</u> the problem <u>statement into</u> ~~as~~ a natural language query or ~~as~~ a Boolean query.

6. (currently amended) The system of claim 3<u>1</u>, ~~further~~ wherein the at least one knowledge base ~~is~~ <u>includes</u> a semantic analysis knowledge base.

7. (currently amended) The system of claim 3<u>1</u>, wherein <u>the</u> at least one knowledge base is resident on a storage medium co-located with the computer.

8. (currently amended) The system of claim 3<u>1</u>, wherein <u>the</u> at least one knowledge base is resident on a corporate server.

9. (currently amended) The system of claim 3<u>1</u>, wherein <u>the</u> at least one knowledge base is remotely accessed.

10. (currently amended) The system of claim 3~~1~~, wherein the at least one knowledge base is a patent collection that is remotely accessed.

11. (currently amended) The system of claim 3~~1~~, wherein the ~~program has a portion or portions for accessing~~ knowledge search tool is configured to access a plurality of knowledge bases ~~that are~~ selected from a group including: ~~;~~

at least one knowledge base resident on a storage medium co-located with the computer~~;~~ ~~,~~

at least one knowledge base on a corporate server~~;~~ ~~,~~ and

at least one knowledge base ~~accessed by~~ accessible via an internet link.

12. (currently amended) The system of claim 3~~1~~, wherein the knowledge search tool is configured to ~~query is~~ submitted the query to the at least one knowledge base without intervention by a user.

13. (currently amended) The system of claim 3~~1~~, wherein:

the problem analysis tool is configured ~~in which the portion or portions for generating identification of the problem is done by an analysis~~ to determine functional relationships between key elements of the system model ~~components under consideration~~; and

the query formatter is configured to ~~portion or portions for generating from automatic reformulation as a query is done~~ reformulate the machine representation of the problem statement by translating ~~a~~ the functional relationships into ~~a~~ the natural language query.

14. (currently amended) The system of claim 3~~1~~, wherein:

the problem analysis tool is configured to perform a ~~in which identification of the problem is done by~~ root cause analysis of the system model that establishes one or more nodes ~~between events under consideration~~ and

the ~~query formatter~~ is configured to translate ~~automatic reformulation translates a~~ the one or more nodes into ~~a~~ the natural language query.

15. (currently amended) The system of claim 11, wherein the at least one ~~of said~~ knowledge ~~base~~ ~~bases is~~ includes a semantic analysis knowledge base.

16. (cancelled)

17. (currently amended) The computer program product of claim 32~~16~~, ~~further~~ wherein reformulating the machine representation of the problem includes ~~into a natural query~~ ~~said problem reformulation as a natural language query is done by a portion or portions of the program that translates~~ includes translating functional relationships in the machine representation of the problem statement into semantic relationships.

18. (currently amended) The computer program product of claim 32~~16~~, ~~further~~ wherein one or more of the at last one knowledge base is a semantic analysis knowledge base.

19. (currently amended) The computer program product of claim 32~~16~~, wherein the at least one knowledge base is resident on a storage medium co-located with at least one of the one or more processors.

20. (currently amended) The computer program product of claim 32~~16~~, wherein the at least one knowledge base is resident on a corporate server.

21. (currently amended) The computer program product of claim 32~~16~~, wherein the at least one knowledge base is remotely accessible ~~accessed~~.

22. (currently amended) The computer program product of claim 32~~16~~, wherein the at least one knowledge base is a patent collection that is remotely accessible ~~accessed~~.

23. (currently amended) The computer program product of claim 32~~16~~, wherein ~~the program has a portion or portions for~~ accessing at least one ~~a plurality of~~ knowledge ~~bases~~ base includes accessing a plurality of knowledge bases comprising two or more of: ~~that are selected from:~~

at least one knowledge base resident on a storage medium co-located with at least one of the one or more processors;

at least one knowledge base on a corporate server~~; ,~~ and

at least one knowledge base accessible ~~accessed~~ by an internet link.

24. (currently amended) The computer program product of claim 32~~16~~, wherein the method includes submitting the query ~~is submitted~~ to the at least one knowledge base without intervention by a user.

25. (currently amended) The computer program product of claim 32~~16~~, wherein the method includes: ~~in which~~

identifying ~~identification of~~ the problem to be solved includes analyzing ~~is done an analysis of~~ functional relationships between ~~components under consideration~~ key elements of the system model; and

reformulating the machine representation of the problem statement into the natural language query includes ~~the automatic reformulation as a query is done by~~ translating ~~a~~ the functional relationships into ~~a~~ the natural language query.

26. (currently amended) The computer program product of claim 32~~16~~, wherein the method includes: ~~in which~~

identifying the problem to be solved includes performing a ~~the problem identification step is done by~~ root cause analysis of the system model that establishes one or more nodes ~~between events under consideration;~~ and

reformulating the machine representation of the problem statement into the natural language query includes the automatic problem reformulation step translates translating the a nodes into a the natural language query.

27. (original) The computer program product of claim 23 wherein at least one of said knowledge bases is a semantic analysis knowledge base.

28. (currently amended) The method of claim 29~~1~~, further comprising the step of presenting the set of solution suggestions via an output device that result from searching of the one or more knowledge bases.

29. (new) A method of obtaining solution suggestions for problems, the method implemented in a computer system having at least one processor and data storage medium, said method comprising:

analyzing a system model, including identifying a problem to be solved and generating a machine representation of a problem statement representing the problem;

reformulating the machine representation of the problem statement into a natural language or Boolean query; and

accessing at least one knowledge base having problem solutions stored therein, and automatically obtaining a set of solution suggestions from the at least one knowledge base responsive to the query.

30. (new) A system for obtaining solution suggestions for problems, said system comprising:

at least one processor and at least one storage medium;

a user input device configured to enable user interact with at least a portion of a system model to enable identification of a problem to be solved, represented as a problem statement;

a problem analysis tool configured to generate a machine representation of the problem statement;

a query formatter configured to reformulate the machine representation of the problem statement into a natural language or Boolean query; and

at least one knowledge base comprising:

at least one database comprising problem solutions; and

a knowledge search tool configured to automatically search the at least one database for a set of solution suggestions responsive to the query.

31. (new) A system for obtaining solution suggestions for problems, the system comprising:

at least one processor and at least one storage medium;

a problem analysis tool configured to analyze a system model to identify a problem to be solved and to generate a machine representation of a problem statement representing the problem;

a query formatter configured to reformulate the machine representation of the problem statement into a natural language query;

at least one knowledge base comprising:

at least one database comprising problem solutions; and

a knowledge search tool configured to automatically search the at least one database for a set of solution suggestions responsive to the query; and

an output device configured to present the set of solution suggestions.

32. (new) A computer program product stored on at least one storage medium for execution by one or more processors to perform a method of obtaining solution suggestions for problems, said method comprising:

analyzing a system model, including identifying a problem to be solved and generating a machine representation of a problem statement representing the problem;

reformulating the machine representation of the problem statement into a natural language query; and

accessing at least one knowledge base having problem solutions stored therein, and automatically obtaining a set of solution suggestions from the at least one knowledge base responsive to the query.